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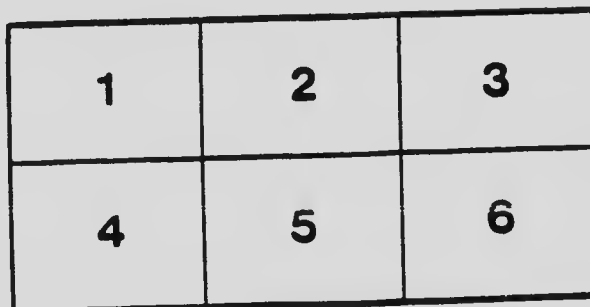
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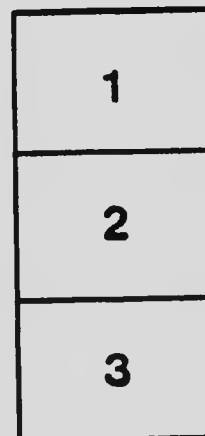
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**DEPARTMENT OF THE INTERIOR
CANADA**

FORESTRY BRANCH

Hon. FRANK OLIVER, Minister of the Interior
W. W. COBY, Deputy Minister of the Interior
R. H. CAMPBELL, Superintendent of Forestry

BULLETIN No. 4



Forest Products

of

Canada

Compiled by

A. H. D. ROSS, M.A., M.F.,

Of the Faculty of Forestry, University of Toronto,
by Instruction of the Forestry Branch

CORRECT TO DECEMBER, 1908

OTTAWA

Government Printing Bureau

1909



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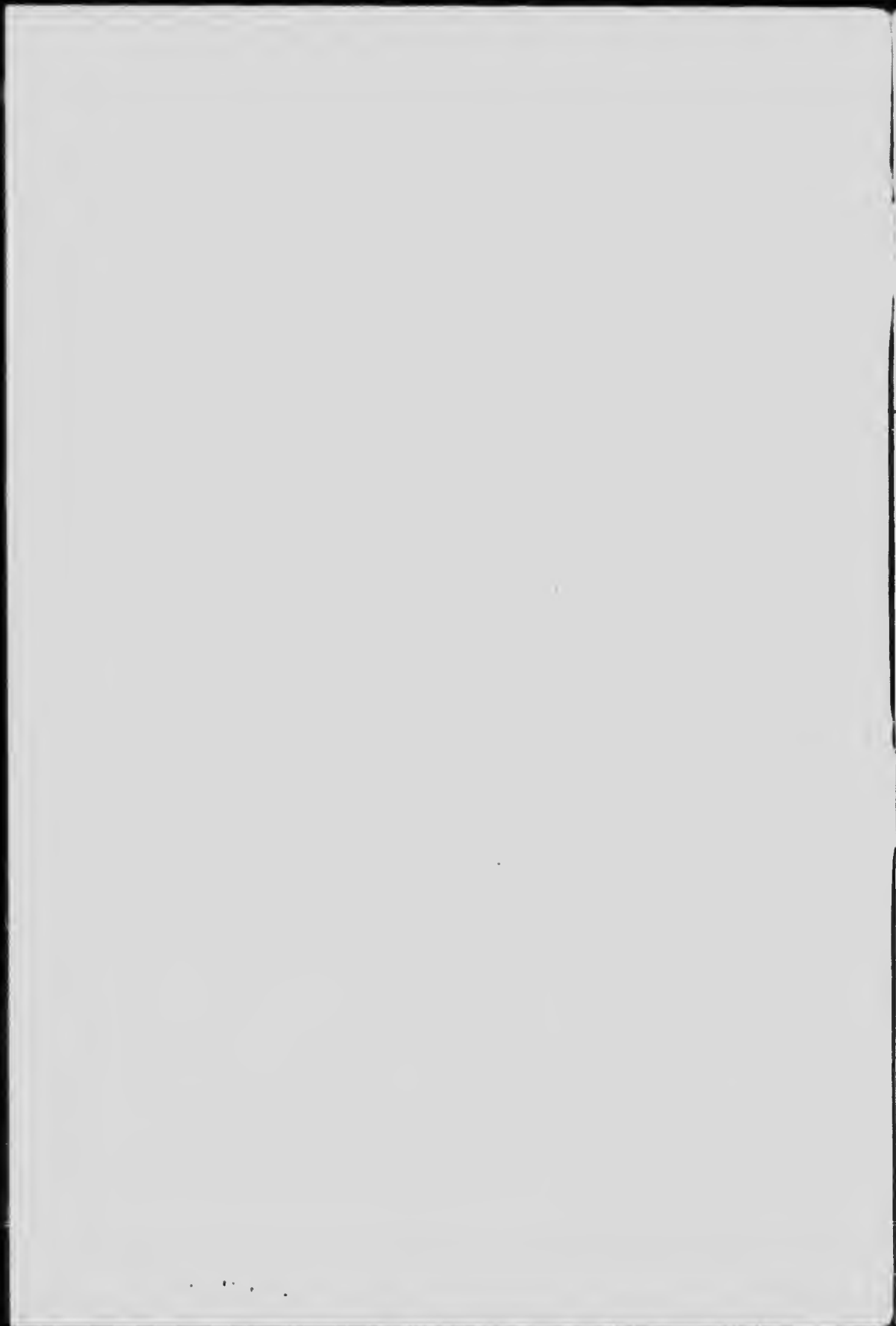
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FOREST PRODUCTS OF CANADA.

For a proper understanding of the position of Canada as a forest country it is necessary to have definite information in regard to (1) the forest area of the Dominion, (2) the stand of timber, (3) the production of timber and other forest products, (4) the export and import of forest products. It is proposed to discuss in this report to what extent such information is available in Canada, to give such statistics as are reliable and to indicate the means which should be taken to obtain the definite information which is necessary.

EXPORTS.

The most definite and complete statistics in relation to forest products are those in regard to import and export furnished by the trade returns. These show that in 1868 the total unmanufactured wood products exported were valued at \$18,712,625, while in 1908 they reached the sum of \$41,179,170. Manufactured wood products in 1908 amounted to \$4,997,795, making a total for 1908 of \$49,168,265.

Of the unmanufactured wood products \$12,356,521 went to other parts of the British Empire, including \$11,813,094 to Great Britain; \$27,170,574 went to the United States; \$401,280 went to the Continent of Europe; \$2,968,246 to South America and the West Indian Islands; \$412,415 to Mexico, and \$163,509 to China and Japan. It will be noticed that the United States is a customer for over 60 per cent and Great Britain for over 25 per cent.

The square timber trade declined from 651,736 tons valued at \$4,188,862 in 1868 to 59,833 tons valued at \$1,520,005 in 1908. The average price per cubic foot increased from 46 cents to 63 cents. Timber was prepared in this way for shipping to Great Britain and the chief advantages were the removal of sapwood and the greater convenience over round logs in lading vessels. It is a decided advantage to have this wasteful method replaced by the shipping of deals to the British market.

In 1890 the value of the pulpwood exported was \$80,005. Much the greater proportion in each year has gone to the United States, and since 1907 the whole export has been to that country. In 1904 the export to the United States was 179,238 cords valued at \$1,788,049, and in 1908 901,861 cords valued at \$4,655,371. From these figures it will be seen that in five years the quantity of pulpwood exported from Canada to the United States has almost doubled, and that its value has increased 160 per cent. The increase per cord was from \$3.73 to \$5.16. The last report, that of 1907, in regard to consumption of pulpwood in the United States shows a total of 3,664,176 cords, of which the Canadian product formed about one-fourth.

The value of wood pulp exported in 1890 was \$168,180, and in 1908 \$4,037,852; the value of the export to the United States being \$3,545,530, and to Great Britain \$485,199. The quantity of mechanically ground pulp exported was 4,027,939 cwt., and of chemically prepared pulp 783,224 cwt.

The total export of wood products would be about three billion feet, board measure.

EXPORTS SINCE CONFEDERATION.

UNMANUFACTURED WOOD PRODUCTS.—THE PRODUCT OF CANADA.

The following table, from the Report of the Department of Trade and Commerce for 1907, shows what proportion of Canada's unmanufactured wood products were exported to Great Britain, the United States and other countries since Confederation:—

| Fiscal Years. | Great Britain. | United States. | Other Countries. | Totals. |
|---------------|----------------|----------------|------------------|------------|
| | \$ | \$ | \$ | \$ |
| 1868..... | 9,354,241 | 7,812,526 | 1,545,855 | 18,712,625 |
| 1870..... | 10,600,904 | 8,925,122 | 2,007,181 | 21,533,300 |
| 1880..... | 8,673,336 | 6,532,118 | 1,648,753 | 16,851,507 |
| 1890..... | 14,098,865 | 10,217,640 | 1,832,631 | 26,170,136 |
| 1893..... | 10,821,082 | 13,859,960 | 1,678,868 | 26,359,910 |
| 1894..... | 11,475,692 | 13,398,196 | 1,571,560 | 26,355,448 |
| 1895..... | 9,975,833 | 12,482,969 | 1,432,361 | 23,891,166 |
| 1896..... | 12,186,806 | 13,528,917 | 1,460,833 | 27,175,686 |
| 1897..... | 14,059,585 | 15,435,759 | 1,763,385 | 31,258,729 |
| 1898..... | 15,638,519 | 9,336,252 | 1,536,738 | 26,511,539 |
| 1899..... | 15,777,996 | 9,921,701 | 2,321,829 | 28,021,529 |
| 1900..... | 15,058,036 | 12,805,139 | 1,800,193 | 29,663,668 |
| 1901..... | 15,662,749 | 12,199,617 | 2,156,491 | 30,009,857 |
| 1902..... | 14,154,467 | 15,517,528 | 2,447,431 | 32,119,429 |
| 1903..... | 16,742,435 | 16,977,232 | 2,666,318 | 36,386,015 |
| 1904..... | 14,962,927 | 15,009,838 | 3,119,157 | 33,091,922 |
| 1905..... | 12,214,007 | 17,837,049 | 3,181,627 | 33,235,683 |
| 1906..... | 12,498,738 | 23,085,940 | 3,210,392 | 38,821,170 |
| 1907..... | 11,784,564 | 18,397,753 | 3,294,781 | 33,476,098 |
| 1908..... | 11,183,091 | 27,170,751 | 5,856,802 | 44,170,170 |

* 9 months.

This table shows that the trade with Great Britain has increased from \$9,351,211 in 1886, to \$11,843,094 in 1908; whilst the trade with the United States during the same period has increased from \$7,842,526 to \$27,470,574. It also shows that the exports to other countries have increased from \$1,545,855 to \$5,856,802, and that the total export has increased from \$18,742,625 to \$44,170,470.

MANUFACTURED WOOD PRODUCTS. —THE PRODUCT OF CANADA.

| Years. | Totals |
|------------|-----------|
| | \$ |
| 1868..... | 71,494 |
| 1870..... | 86,532 |
| 1880..... | 409,748 |
| 1890..... | 870,166 |
| 1893..... | 1,280,990 |
| 1894..... | 1,318,199 |
| 1895..... | 1,289,622 |
| 1896..... | 1,555,108 |
| 1897..... | 1,652,317 |
| 1898..... | 2,372,039 |
| 1899..... | 2,819,708 |
| 1900..... | 3,127,242 |
| 1901..... | 2,962,688 |
| 1902..... | 3,189,813 |
| 1903..... | 4,173,952 |
| 1904..... | 3,633,223 |
| 1905..... | 4,117,038 |
| 1906..... | 4,612,917 |
| 1907*..... | 3,600,947 |
| 1908..... | 4,997,795 |

*9 months.

THE EXPORT OF PULP WOOD.—THE PRODUCT OF CANADA.

Previous to the year 1890 the reports of the Department of Trade and Commerce do not state the value of wood for pulp which has been exported from Canada. From 1890 to 1908 the values of the exports to Great Britain, the United States and other countries were as follows:—

| Fiscal Years. | Great Britain. | United States. | Other Countries. | Totals. |
|---------------|-------------------|-------------------|---------------------|-----------|
| | \$ | \$ | \$ | \$ |
| 1890..... | 22,868 | 57,197 | | 80,065 |
| 1891..... | 18,362 | 170,636 | | 188,998 |
| 1892..... | 36,146 | 183,312 | | 219,458 |
| 1893..... | 13,461 | 371,981 | 650 | 386,092 |
| 1894..... | 21,250 | 369,010 | | 393,260 |
| 1895..... | 9,396 | 458,613 | | 468,009 |
| 1896..... | 27,580 | 600,285 | | 627,865 |
| 1897..... | 33,931 | 677,221 | | 711,152 |
| 1898..... | 34,772 | 876,690 | 570 | 912,041 |
| 1899..... | 28,099 | 809,795 | 4,192 | 842,086 |
| 1900..... | 38,370 | 864,077 | 325 | 902,772 |
| 1901..... | 32,198 | 1,364,821 | | 1,397,019 |
| 1902..... | 120,445 | 1,194,593 | | 1,315,038 |
| 1903..... | | 1,558,560 | | 1,558,560 |
| 1904..... | | 1,788,049 | | 1,788,049 |
| 1905..... | | 2,600,814 | | 2,600,814 |
| 1906..... | | 2,649,106 | | 2,649,106 |
| 1907*..... | | 1,998,805 | | 1,998,805 |
| 1908..... | | 4,655,371 | | 4,655,371 |

*9 months.

It will be noticed that during the last six years the entire export trade has been with the United States. Previous to 1904 the number of cords exported is not stated. From that year to the present time the quantities and values have been:—

| Year. | Cords. | Valued at. |
|------------|---------|------------|
| | | \$ |
| 1904..... | 479,238 | 1,788,049 |
| 1905..... | 593,624 | 2,600,814 |
| 1906..... | 614,286 | 2,649,106 |
| 1907*..... | 452,486 | 1,998,805 |
| 1908..... | 901,861 | 4,655,371 |

*9 months.

From these figures it will be seen that in the short space of five years the quantity of pulpwood exported from Canada to the United States has almost doubled, and that its value has increased 160 per cent.

THE EXPORT OF WOOD PULP.—THE PRODUCT OF CANADA.

The Trade and Navigation returns for the last 19 years gives the following information regarding the export of wood pulp from Canada:—

| | Great Britain. | United States. | Other Countries. | Totals. |
|--------------------------------------|-------------------|-------------------|---------------------|-----------|
| | \$ | \$ | \$ | \$ |
| Not separately stated prior to 1890. | | | | |
| 1890..... | 460 | 147,098 | 20,622 | 168,180 |
| 1891..... | | 280,619 | | 280,619 |
| 1892..... | | 355,303 | | 355,303 |
| 1893..... | 1,640 | 454,253 | | 455,893 |
| 1894..... | 178,255 | 398,256 | 706 | 577,217 |
| 1895..... | 251,848 | 336,385 | 2,641 | 590,874 |
| 1896..... | 113,557 | 557,085 | 5,135 | 675,777 |
| 1897..... | 164,138 | 576,720 | 1,101 | 741,959 |
| 1898..... | 676,100 | 534,305 | 16 | 1,210,421 |
| 1899..... | 671,704 | 578,229 | 24,343 | 1,274,276 |
| 1900..... | 562,178 | 1,193,753 | 60,085 | 1,816,016 |
| 1901..... | 931,722 | 937,330 | 65,155 | 1,937,207 |
| 1902..... | 818,580 | 1,170,400 | 57,418 | 2,046,398 |
| 1903..... | 1,129,173 | 1,795,798 | 226,002 | 3,150,943 |
| 1904..... | 548,720 | 1,807,442 | 52,912 | 2,409,074 |
| 1905..... | 680,199 | 2,694,122 | 24,837 | 3,399,158 |
| 1906..... | 998,702 | 2,419,628 | 59,820 | 3,478,150 |
| 1907* | 538,600 | 2,397,148 | 28,888 | 2,964,636 |
| 1908..... | 485,199 | 3,545,530 | 7,123 | 4,037,852 |

*9 months.

EXPORTS FOR 1908.—THE PRODUCT OF CANADA.

| | Quantity, | Value, | Quantity, | Value, |
|--|---------------|------------|------------|------------|
| | | \$ | Tons, | \$ |
| Square timber | | | 59,823 | 1,520,005 |
| White pine..... Tons. | 33,018 | 998,298 | | |
| Red pine..... " | 309 | 6,097 | | |
| Birch..... " | 10,339 | 127,085 | | |
| Oak..... " | 6,052 | 157,575 | | |
| Elm..... " | 5,520 | 147,500 | | |
| Other woods..... " | 4,585 | 83,450 | | |
| Lumber... | | | | 33,136,732 |
| Planks and boards..... Bd. ft. | 1,090,559,000 | 21,087,569 | | |
| Spruce and other deals..... St. Hds. | 177,087 | 6,670,673 | | |
| Pine deals..... " | 25,220 | 1,666,672 | | |
| Deal ends..... " | 8,532 | 318,509 | | |
| Joists and scantling..... Bd. ft. | 85,112,000 | 1,046,465 | | |
| Laths, palings and pickets..... " | 620,416,000 | 1,740,486 | | |
| Staves and headings..... " | | 215,876 | | |
| Lumber not otherwise specified..... | | 390,582 | | |
| Saw logs | | | Bd. ft. | |
| Spruce..... Bd. ft. | 9,820,000 | 101,231 | 71,323,000 | 699,138 |
| Elm..... " | 1,469,000 | 18,967 | | |
| Pine..... " | 231,000 | 2,894 | | |
| Other woods..... " | 59,803,000 | 576,046 | | |
| Pulpwood..... Cords. | | | 901,861 | 4,655,371 |
| Railway ties..... Pes. | | | 2,132,731 | 657,132 |
| Shingles..... M. | | | 1,090,600 | 2,547,985 |
| Box shooks..... | | | | 205,547 |
| Telegraph, hop, hoop and other poles..... | | | | 117,406 |
| Firewood..... Cords. | | | 29,194 | 83,775 |
| Tanbar..... " | | | 7,035 | 34,215 |
| Pot and pearl ashes..... Brs. | | | 743 | 29,497 |
| Other products..... | | | | 483,777 |
| Total value of unmanufactured wood products..... | | | | 8,814,595 |
| | | | | 44,170,740 |

MANUFACTURED WOOD PRODUCTS.

| | Value, |
|--|------------|
| | \$ |
| Wood pulp..... | 4,037,852 |
| Household furniture..... | 174,505 |
| Doors, sashes and blinds..... | 129,905 |
| Matches and match splints..... | 83,404 |
| Other products..... | 572,129 |
| Total..... | 4,997,795 |
| Total exports of wood products for 1908..... | 40,168,535 |

IMPORTS.

Notwithstanding the fact that Canada exports forest products largely, there is a considerable import, mainly from the United States. The total value of the imports increased from \$2,412,572 in 1874 to \$12,032,595 in 1908. For the ten years 1897 to 1906 inclusive, the total imports amounted to \$59,934,770, \$57,520,731 coming from the United States, \$919,398 from Great Britain, and the remaining \$1,494,541 from other countries. For this period 94 per cent of imports were from the United States, two per cent from Great Britain, and four per cent from other countries.

In recent years the western prairie provinces have imported considerable quantities of lumber and other construction material from some of the western states, particularly Minnesota. In 1905 the import of pine from Minnesota and Wisconsin was 125,000,000 feet board measure, but this fell in 1907 to 62,642,941 feet. In the older provinces there is a considerable import of hardwoods such as oak, ash, walnut, hickory, cherry, &c., which is largely due to the denudation of the hardwood districts in south-western Ontario and elsewhere. The import of oak for 1908 was 51,542,685 feet board measure, but this was exceeded by pitch pine (under which are included several species of pine from the southern states) with an import of 68,946,389 feet board measure. The import includes also such manufactured articles as furniture, veneers, hubs, spokes, staves, dressed lumber, ties, lath, shingles, &c.

The following table, from the report of the Department of Trade and Commerce for 1907, shows the value of dutiable and free imports, and also what proportion of each came from Great Britain, the United States and other countries:—

| Fiscal Years. | WOOD AND MANUFACTURES OF WOOD. | | | | | | | |
|-------------------|--------------------------------|----------------|------------------|-----------|----------------|----------------|------------------|------------|
| | Dutiable. | | | | Free. | | | |
| | Great Britain. | United States. | Other Countries. | Totals. | Great Britain. | United States. | Other Countries. | Totals. |
| | \$ | \$ | \$ | \$ | \$ | \$ | \$ | \$ |
| 1874..... | 30,450 | 911,211 | 35,476 | 977,137 | 23,965 | 1,398,870 | 12,600 | 1,435,435 |
| 1890..... | 73,726 | 1,428,764 | 72,156 | 1,574,646 | 3,563 | 1,196,496 | 17,382 | 1,217,441 |
| 1893..... | 110,912 | 982,718 | 74,412 | 1,168,042 | 4,693 | 1,132,159 | 9,371 | 1,146,223 |
| 1894..... | 87,128 | 827,463 | 79,149 | 993,740 | 3,409 | 1,617,115 | 15,791 | 1,666,315 |
| 1895..... | 85,010 | 675,723 | 77,543 | 838,276 | 1,361 | 1,653,372 | 10,496 | 1,665,229 |
| 1896..... | 89,774 | 764,869 | 77,934 | 932,577 | 2,045 | 1,958,343 | 8,655 | 1,969,043 |
| 1897..... | 70,286 | 808,159 | 71,276 | 949,721 | 11,677 | 2,036,576 | 1,930 | 2,050,183 |
| 1898..... | 53,090 | 824,318 | 75,222 | 952,630 | 5,847 | 2,535,786 | 1,945 | 2,543,578 |
| 1899..... | 51,982 | 983,738 | 105,116 | 1,140,836 | 1,177 | 2,919,433 | 8,998 | 2,929,608 |
| 1900..... | 76,781 | 1,200,025 | 95,598 | 1,372,404 | 10,664 | 3,606,549 | 6,826 | 3,624,039 |
| 1901..... | 74,425 | 1,229,065 | 123,967 | 1,427,457 | 15,528 | 3,481,338 | 12,749 | 3,509,615 |
| 1902..... | 60,038 | 1,404,947 | 152,170 | 1,617,155 | 7,631 | 4,248,462 | 18,116 | 4,274,209 |
| 1903..... | 101,900 | 1,674,914 | 145,595 | 1,922,409 | 13,517 | 5,023,638 | 27,506 | 5,064,061 |
| 1904..... | 81,243 | 2,199,223 | 145,373 | 2,425,839 | 22,705 | 6,911,028 | 33,281 | 6,967,014 |
| 1905..... | 105,008 | 2,251,091 | 165,582 | 2,521,681 | 16,063 | 5,953,146 | 45,798 | 6,015,007 |
| 1906..... | 106,563 | 2,310,836 | 204,336 | 2,621,735 | 31,292 | 5,939,059 | 45,238 | 6,015,589 |
| 1907 (9 mos)..... | 98,607 | 1,898,212 | 162,933 | 2,159,802 | 14,584 | 5,744,823 | 63,562 | 5,822,969 |
| 1908..... | 170,320 | 2,800,575 | 217,266 | 3,188,161 | 44,609 | 6,930,208 | 56,641 | 10,031,548 |

This table shows that between 1874 and 1906 dutiable imports from Great Britain increased from \$30,450 to \$106,563, whilst free imports have varied greatly.

From the United States dutiable imports have increased from \$911,211 in 1874 to \$2,310,836, whilst free imports have risen from \$1,398,870 in 1874 to \$5,939,059 in 1906.

For the ten years, 1897 to 1906, inclusive, the total imports amounted to \$59,934,770, \$57,520,731 coming from the United States, \$919,398 from Great Britain, and the remaining

\$1,494,541 from other countries. Thus it appears that in recent years about 94 per cent of imports are from the United States, 2 per cent from Great Britain, and 4 per cent from other countries

IMPORT OF WOOD PRODUCTS, 1908.

| | Quantity. | Value. |
|--|--------------------|------------|
| \$ | | |
| Manufactures | | |
| Vegeters | | 246,401 |
| Wool pulp | | 58,557 |
| Furniture | | 812,418 |
| Woodenware, handles, &c. | | 215,215 |
| Other manufactures | | 1,453,192 |
| Lumber, timber, planks and boards— | | |
| Cherry, chestnut, gumwood, hickory and whitewood | Bd. ft. 16,050,649 | 681,252 |
| Mahogany | " 1,639,801 | 213,339 |
| Oak | " 54,542,685 | 2,173,793 |
| Pitch pine | " 68,946,389 | 2,170,143 |
| White ash | " 2,062,789 | 196,499 |
| Walnut | " 608,422 | 31,370 |
| Redwood, rosewood, sandalwood, teak, ebony, &c. | | 41,370 |
| Other lumber | Bd. ft. 83,869,000 | 2,119,543 |
| Timber, hewn or sawn | | 190,685 |
| Shingle and other bolts, billets, staves, &c. | | 874,151 |
| Logs and round timber | | 326,192 |
| Fence posts and railroad ties | | 599,544 |
| Laths | 2,740,000 | 12,345 |
| Shingles | 5,052,000 | 12,921 |
| Fuel wood | Cords 37,478 | 128,747 |
| Other unmanufactured products | | 168,078 |
| Total | | 12,844,713 |

FOREST PRODUCTION.

The sources of information in regard to forest products available annually are the reports of the cut on Crown lands obtained through the returns furnished to the Dominion and Provincial Governments, but these are incomplete in the respect that they give little or no information of the cut on lands which are held privately, and which furnish a considerable proportion of the total product. The product of the year 1907, as shown by such returns, was in the neighbourhood of three and one-half billions of feet board measure.

The pine of the eastern states, including white and red pine, still leads in the production with probably one-third of the total, spruce taking second place with about one-fifth. Other species are not so distinguished in the returns that the quantities can be determined. The hardwood production, as far as the returns show, was less than 2,000,000 feet board measure.

It is only at the decennial census that information is obtained in regard to the whole forest product, including that from private lands. The census of 1901 showed a product valued at \$51,000,000, and including a total of about nine billion feet board measure.

With the rapid development of the lumber and pulp industries, and the increasing interest in the whole question of the timber supply of Canada, it is desirable that information of a reliable nature in regard to the forest product should be available from year to year. The necessity for such information was recognized some time ago in the United States, and the Forest Service and the Census Bureau have, with the co-operation of the lumber associations and manufacturers, carried out a scheme for gathering annually the statistics of forest production, which is now so fully elaborated as to give reliable results. The report for 1907 shows a cut in the United States of 40,256,154,000 feet, board measure, of lumber, 3,963,602,000 of lath, 11,824,475,000 shingles.

It is desirable that a system for obtaining similar statistics in regard to the timber production of Canada should be undertaken and placed on a systematic basis without delay.

FOREST PRODUCTS.

CENSUS OF 1901.

| | Quantity | Value. |
|------------------------------------|------------------------|-------------------|
| | | \$ |
| Saw log timber..... | Bls. 10, 3,655,063,000 | 29,793,399 |
| Firewood..... | Cords, 8,816,026 | 14,548,528 |
| Pulpwood..... | " 668,031 | 2,168,509 |
| Square, flat and waney timber..... | C. ft., 11,726,893 | 1,480,312 |
| Railway ties..... | " 8,451,792 | 1,406,913 |
| Fence posts..... | " 16,678,875 | 580,678 |
| Tanbark..... | Cords, 160,712 | 439,598 |
| Piling..... | " 300,429 | 235,169 |
| Telegraph poles..... | " 255,141 | 208,357 |
| Cooperage stock..... | " 31,388 | 49,025 |
| Masts and spars..... | " 758 | 24,843 |
| Hop and hoop poles..... | " 758 | 19,216 |
| Pot and pearl ashes..... | " 758 | 639,177 |
| Value of furs..... | | 51,718,886 |
| Total..... | | 51,718,886 |

WOOD WORKING INDUSTRIES.

Census of manufacturing establishments for the year 1905 (census of 1906):—

| Industry. | Establish- | Employees. | Wages Paid. | Value |
|------------------------------|--------------|---------------|-------------------|--------------------|
| | ments. | | | of Products. |
| | No. | No. | \$ | \$ |
| Log products..... | 1,891 | 54,551 | 21,029,119 | 69,084,920 |
| Lumber products..... | 634 | 13,331 | 6,256,247 | 21,078,158 |
| Paper..... | 31 | 4,974 | 2,208,526 | 9,419,842 |
| Wood pulp..... | 22 | 2,456 | 1,023,720 | 3,793,131 |
| Furniture..... | 181 | 8,141 | 3,260,574 | 9,693,688 |
| Cooperage..... | 103 | 1,634 | 590,197 | 1,837,632 |
| Boxes, wooden..... | 68 | 1,507 | 486,974 | 1,679,483 |
| Box shooks..... | 3 | 285 | 97,000 | 530,600 |
| Boxes, cigar..... | 4 | 115 | 51,898 | 293,726 |
| Woodworking and turning..... | 49 | 785 | 316,042 | 786,679 |
| Picture frames..... | 14 | 432 | 29,965 | 695,504 |
| Woodenware..... | 4 | 132 | 187,936 | 472,295 |
| Boats and canoes..... | 49 | 317 | 142,839 | 294,878 |
| Refrigerators..... | 5 | 182 | 88,156 | 283,000 |
| Matches..... | 5 | 299 | 91,943 | 226,743 |
| Baskets..... | 22 | 322 | 98,596 | 224,807 |
| Shoe lasts and pegs..... | 8 | 101 | 43,066 | 104,687 |
| Corks..... | 3 | 97 | 39,659 | 195,516 |
| Ashes, pot and pearl..... | 4 | 7 | 2,200 | 5,200 |
| Totals..... | 3,094 | 90,444 | 36,239,556 | 119,880,489 |

FOREST AREA.

The information available in regard to the forest area of Canada is of the most general nature, and the various estimates which have been made are uncertain. Actual knowledge is confined to restricted areas, and general conclusions are based on deductions therefrom, on judgments from climatic, geologic and other conditions, or on measurements made upon the map. In regard to the timber granted under timber license, and that included in forest reserves, there is fairly definite information, but in regard to the general forest areas knowledge is confined to the routes of travel followed by and reported on by the members of the staff of the Geological Survey. No attempt, except the survey undertaken by the province of Ontario in 1900, has been made either by the Dominion or Provincial Governments to have any systematic examination or estimate of the greater forest areas. In the interests of accurate knowledge of one of the greatest of Canada's natural resources, it is desirable that in all the provinces, and in Dominion territory, a forest survey should be undertaken and systematically carried out throughout the whole forested area.

In the census of 1891 the forest area of Canada was estimated at 799,000,000 acres. More recent estimates reduce the area to between 500,000,000 and 600,000,000 acres, but this will include areas of timber which is not at present merchantable, and for land covered with merchantable timber presently available estimates have been made as low as 200,000,000 acres, and even 100,000,000 acres. It is to be remembered, however, that these are estimates based from deductions from a general knowledge of conditions or of special areas, and none of them are entitled to great reliability.

The stand of timber is even less known, but between five and six hundred billion feet of timber suitable for sawing would be a conservative estimate. In addition there are large areas suitable for pulpwood. The whole forest area of Canada has suffered so severely from fire that the average stand must be computed at a low figure.

The area included in forest reserves and parks in the Dominion is 128,060,800 acres, and the area held under timber license or lease is 75,800,000 acres, but these areas overlap to a considerable extent.

DOMINION FOREST RESERVES.

(Established by Forest Reserves Act, 1906.)

| | Sq. Miles. |
|---------------------------------|------------|
| Manitoba— | |
| Riding Mountain Reserve..... | 1,535 |
| Turtle Mountain Reserve..... | 109½ |
| Lake Manitoba West Reserve..... | 248 |
| Spruce Woods Reserve..... | 110 |
| Duck Mountain Reserve..... | 1,251 |
| Porcupine No. 1 Reserve..... | 322 |
| | 3,575½ |
| Saskatchewan— | |
| Beaver Hills Reserve..... | 72 |
| The Pines Reserve..... | 145 |
| Moose Mountain Reserve..... | 163 |
| Porcupine No. 2 Reserve..... | 360 |
| | 740 |
| Alberta— | |
| Cooking Lake Reserve..... | 114 |
| Cypress Hills Reserve..... | 18 |
| Kootenay Lakes Reserve..... | 54 |
| | 186 |

British Columbia—

| | Sq. Miles. |
|---|------------|
| Long Lake Reserve..... | 196 |
| Monte Hills Reserve..... | 196 |
| Martin Mountain Reserve..... | 18 |
| Niskonlith Reserve..... | 124½ |
| Tranquille Reserve..... | 149 |
| Hat Creek Reserve..... | 206 |
| Donald Reserve..... | 72 |
| Larch Hills Reserve..... | 25 |
| | 890½ |
| Total area of Dominion Forest Reserves..... | 5,391½ |

DOMINION NATIONAL PARKS.

| | Sq. Miles. |
|---|------------|
| Rocky Mountain Park, Alta. Set apart by special Act of Parliament, 1887; extended by Act of 1902..... | 4,500 |
| Yoho Park, B.C. Set apart by Order in Council of December 14, 1901..... | 828½ |
| Glacier Park, B.C. Set aside by Order in Council of October 11, 1888. Area enlarged by Order in Council of November 26, 1903..... | 576 |
| Jasper Park. Set apart by Order in Council of September 14, 1907..... | 5,000 |
| Total area of Dominion National Parks..... | 10,904½ |
| Total area of Dominion Forest Reserves..... | 5,391½ |
| Total..... | 16,296½ |

ONTARIO RESERVES AND NATIONAL PARKS.

| | Sq. Miles |
|-------------------------------------|-----------|
| Algonquin National Park, 1893..... | 1,733 |
| Eastern Forest Reserve, 1899..... | 125 |
| Sibley Reserve, 1900..... | 70 |
| Timagami Reserve, 1901..... | 2,200 |
| Western Timagami Reserve, 1903..... | 3,700 |
| Mississauga Reserve, 1904..... | 2,916 |
| Lake Nipigon Reserve, 1905..... | 7,297 |
| Total area of Forest Reserves..... | 18,041 |

QUÉBEC FOREST RESERVES AND NATIONAL PARKS.

| | Sq. Miles |
|--|-----------|
| Laurentide National Park. Set aside 1895; enlarged 1905..... | 3,271½ |
| Gaspé Park, 1906..... | 2,500 |
| Rimouski Reserve, 1906..... | 1,237 |
| Saguenay and Labrador Reserve, 1906..... | 110,000 |
| Ottawa Reserve, 1907; enlarged, 1908..... | 27,712 |

| | Sq. Miles |
|---|-----------|
| Quebec Forest Reserves <i>concluded.</i> | |
| St. Maurice Reserve, 1907 | 21,111 |
| Chaudière Reserve, 1906 | 318½ |
| Peribonka, 1908 | 3,500 |
| St. Francis, 1908 | 150 |
| Temiscouata, 1907 | 227 |
| Barachois, 1907 | 113 |
| Rivière du Loup, 1908 | 500 |
| Bonaventure and Gaspé, 1907 | 1,733 |
| Laurentian, 1908 | 900½ |
| Rivière Ouelle, 1907 | 329 |
| Bungay, Chabot and Pohenegami ² , 1908 | 252 |
| Beaulieu-Hourdages, 1907 | 35 |
| Bellechasse, 1906 | 35 |
| Maskinongé, 1908 | 100 |
| Total area of Forest Reserves . . . | 171,064½ |

DISTRICT UNDER DOMINION ADMINISTRATION.

The district under Dominion administration includes the provinces of Manitoba, Saskatchewan and Alberta, and in the province of British Columbia a belt of forty miles in width along the main line of the Canadian Pacific Railway and a tract of three million acres at the headwaters of the Peace River. It also includes all the districts outside of provincial jurisdiction.

The area under license and permit is 9,422 square miles, or 6,030,980 acres. The area included in forest parks and forest reserves is 16,296 square miles or 10,429,410 acres.

The lumber cut in 1907 was 141,050,292 feet board measure of lumber, 14,273,300 lath and 60,000 shingles. The cut in the railway belt in British Columbia was 42,000,000 feet board measure, and the remainder, consisting mainly of spruce but including also jack pine (*Pinus Banksiana* and *Pinus Murrayana*) tamarack, and fir was cut in the prairie provinces. The official returns do not differentiate the species.

No general survey of the timber districts has been made, but special surveys have been made of some of the forest reserves. The forest area has been computed at ninety-six million acres, and the stand of timber at one hundred and ninety two billion feet board measure.

LUMBER CUT.

The following table, compiled from the reports of the Department of the Interior for the last ten years, shows the quantity of lumber, lath, shingles and shingle bolts cut from Dominion lands situated in Manitoba, Saskatchewan, Alberta and the railway belt in British Columbia during the last 28 years.

| Year. | Lumber. | Lath. | Shingles. | Shingle Bolts. |
|---------|---------------|------------|-------------|----------------|
| | Bd. Ft. | | | Cords. |
| 1880. | 10,000,000 | | | |
| 1881. | 16,694,323 | 688,300 | 4,082,100 | |
| 1882. | 26,673,267 | 2,251,100 | 6,450,311 | |
| 1883. | 36,701,369 | 6,284,827 | 11,179,033 | |
| 1884. | 28,687,814 | 802,400 | 652,500 | |
| 1885. | 21,516,323 | 2,803,253 | 6,646,011 | |
| 1886. | 39,521,592 | 1,725,250 | 4,746,750 | |
| 1887. | 36,413,687 | 2,605,850 | 5,453,023 | |
| 1888. | 49,317,230 | 2,267,575 | 6,241,166 | |
| 1889. | 39,840,554 | 682,400 | 1,621,750 | |
| 1890. | 30,605,900 | 156,402 | 1,449,916 | |
| 1891. | 32,530,530 | 967,350 | 4,197,000 | |
| 1892. | 40,672,928 | 1,195,150 | 4,546,000 | |
| 1893. | 38,104,797 | 455,750 | 2,687,499 | |
| 1894. | 39,736,976 | 1,089,179 | 7,210,677 | |
| 1895. | 30,016,491 | 748,500 | 5,316,800 | |
| 1896. | 34,817,909 | 338,083 | 3,615,948 | |
| 1897. | 34,370,590 | 135,150 | 2,034,616 | |
| 1898. | 39,096,497 | 24,200 | 1,584,500 | |
| 1899. | 52,359,740 | 383,350 | 1,439,500 | |
| 1900. | 66,886,970 | 985,000 | 5,648,750 | |
| 1901. | 78,773,422 | 631,600 | 1,355,550 | 5,234 |
| 1902. | 82,009,378 | 1,646,450 | 1,490,441 | 5,569 |
| 1903. | 85,613,262 | 2,350,500 | 1,549,250 | 9,735 |
| 1904. | 94,701,388 | 1,997,883 | 1,994,033 | 6,395 |
| 1905. | 114,556,685 | 6,796,484 | 51,567,300 | |
| 1906. | 123,523,295 | 8,667,067 | 579,604 | |
| 1907. | 141,050,292 | 14,273,300 | 60,000 | 8,698 |
| Totals. | 1,484,907,412 | 62,728,253 | 117,900,800 | 35,631 |

LUMBER SOLD IN MANITOBA.

The following table, compiled from the Reports of the Department of the Interior, shows the amount of lumber sold in Manitoba and the province of Saskatchewan as far west as Regina, during the last eleven years:—

| Year. | Spruce cut from Dominion Lands. | Lumber from Ontario. | Pine Logs and Lumber Imported from Minnesota and Wisconsin. | British Columbia Products. | Total. |
|-----------|---------------------------------|----------------------|---|----------------------------|-------------|
| 1897..... | 14,241,900 | 55,800,000 | 16,871,104 | 6,000,000 | 92,921,013 |
| 1898..... | 15,267,041 | 60,000,000 | 35,751,960 | 9,000,000 | 120,019,001 |
| 1899..... | 20,161,680 | 45,000,000 | 31,351,851 | 14,000,000 | 112,513,531 |
| 1900..... | 21,692,680 | 55,500,000 | 37,800,402 | 15,000,000 | 131,993,082 |
| 1901..... | 31,532,300 | 60,000,000 | 11,000,000 | 16,000,000 | 160,532,300 |
| 1902..... | 30,784,783 | 101,500,000 | 13,228,000 | 20,000,000 | 165,512,783 |
| 1903..... | 41,759,853 | 114,450,000 | 43,570,000 | 70,000,000 | 274,779,853 |
| 1904..... | 42,860,143 | 125,000,000 | 70,000,000 | 105,000,000 | 342,860,143 |
| 1905..... | 50,385,363 | 82,000,000 | 125,000,000 | 160,000,000 | 423,385,363 |
| 1906..... | 68,755,905 | 86,000,000 | 109,800,840 | 100,000,000 | 464,556,745 |
| 1907..... | 49,442,970 | 57,000,000 | 62,642,041 | 90,000,000 | 259,085,011 |

BRITISH COLUMBIA.

The forests of British Columbia contain the largest sized timber now standing in Canada consisting of Douglas fir, cedar, hemlock, larch, spruce and pine.

The area under license and lease from the province is 7,850,855 acres, the stand of timber on which will average probably 20,000 feet board measure per acre. The area under license in the Dominion railway belt is 182,758 acres, making a total under license in British Columbia of 8,033,613 acres. The stand of merchantable timber has been estimated at three hundred and twenty billion feet, board measure, but this is not official.

The total cut of lumber on provincial land in 1907 was 566,048,527 feet board measure and in the railway belt 42,000,000 feet or a total of 608,048,527 feet. Over half would be Douglas fir but the species are not differentiated in the returns.

No official survey of the timber area of the province has been made.

TIMBER PRODUCTION.

The following information concerning the timber production of the province of British Columbia has been compiled from the Reports of the Chief Commissioner of Lands and Works for the last 20 years, and Official Bulletin No. 21.

| Year. | No. of Mills. | Daily Capacity. | Timber Leases | TIMBER CUT FROM | | | | | | Total Cut. |
|----------------|---------------|-----------------|---------------|-----------------|-----------------|-----------------|-----------------|------------------|-------------------|---------------|
| | | | | Crown Lands. | Timber Leases. | Timber Limits. | Patented Lands. | Imported Timber. | Private Property. | |
| 1886. | 30 | 1,089,000 | 179,224 | 10,718,400 | 16,399,806 | 16,733,872 | | | | 43,652,138 |
| 1890. | 41 | 1,343,000 | 225,526 | 15,496,169 | 16,337,355 | 26,584,252 | | | | 78,177,033 |
| 1891. | 57 | 1,786,000 | 273,428 | 16,130,011 | 33,765,137 | 15,974,355 | | | | 85,168,533 |
| 1892. | 57 | 1,722,000 | 376,122 | Not subdivided. | Not subdivided. | Not subdivided. | | | | 69,487,320 |
| 1893. | 63 | 1,785,000 | 496,956 | Not subdivided. | Not subdivided. | Not subdivided. | | | | 69,487,320 |
| 1894. | 66 | 1,786,000 | 524,573 | 25,404,686 | 9,937,672 | 607,480 | | | | 64,498,227 |
| 1895. | 77 | 1,815,000 | 495,346 | 53,212,797 | 32,833,500 | 2,637,079 | | | | 112,884,640 |
| 1896. | 85 | 1,903,000 | 496,746 | 61,845,798 | 30,575,180 | 6,986,900 | | | | 112,947,106 |
| 1897. | 90 | 1,805,000 | 502,617 | 61,961,647 | 39,014,010 | | | | | 105,939,397 |
| 1898. | 42 | 1,576,000 | 493,172 | 94,323,086 | 42,192,178 | | | | | 124,346,658 |
| 1899. | 42 | 1,506,000 | 491,649 | 116,973,077 | 49,526,306 | | | | | 171,885,656 |
| 1900. | 35 | 1,445,000 | 476,292 | 171,691,999 | 61,140,583 | | | | | 217,885,656 |
| 1901. | 32 | 1,415,000 | 476,292 | 117,891,685 | 53,746,000 | | | | | 217,885,656 |
| 1902. | •105 | 1,904,000 | 430,397 | 117,891,685 | 53,746,000 | | | | | 217,885,656 |
| 1903. | 107 | 1,692,000 | 587,811 | 379,513,171 | 46,368,662 | | | | | 241,311,709 |
| 1904. | 61 | 1,867,000 | 703,333 | 279,513,171 | 46,368,662 | | | | | 281,945,866 |
| 1905. | 48 | 1,817,000 | 770,362 | 411,103,104 | 49,218,712 | | | | | 348,131,791 |
| 1906. | •77 | 2,195,000 | 790,075 | 453,791,620 | 34,486,500 | | | | | 501,263,803 |
| 1907. | •121 | 2,378,000 | 792,293 | 462,268,081 | 57,890,033 | | | | | 566,148,537 |
| Grand total... | | | | | | | | | | 4,243,370,052 |

*Includes 62 small mills. Statistics cannot be obtained showing daily capacity of all these.

E. & N. Ry. Belt
24,880,504
27,272,770
28,476,929
30,223,045
39,159,359

Board Feet.

From these figures it will be seen that during the past 20 years the average annual cut has been 212,178,502 board feet; also that the cut rose from 43,852,138 in 1888 to 566,048,527 in 1907. During the last three years the cut has exceeded half a billion feet per annum.

It should be borne in mind that these figures do not include the lumber cut from the "Railway Belt" controlled by the Dominion Government. Since 1889 the following quantities of lumber, lath, shingles, &c., have been cut from this area.

| Year. | Lumber. | Laths. | Shingles. | Railway Ties. |
|-------|------------|-----------|-----------|---------------|
| 1889. | 23,750,042 | | | |
| 1890. | 13,546,043 | | | |
| 1891. | 30,507,439 | | | |
| 1892. | 20,062,680 | | | |
| 1893. | 16,083,067 | | | |
| 1894. | 11,175,717 | | | |
| 1895. | 10,012,087 | | | |
| 1896. | 13,712,594 | | | |
| 1897. | 15,251,503 | 62,000 | 217,616 | |
| 1898. | 15,250,000 | | | |
| 1899. | 27,076,621 | 364,900 | 783,000 | 367,932 |
| 1900. | 20,681,003 | 344,700 | 4,404,250 | 241,671 |
| | | | Cords. | |
| 1901. | 32,877,216 | 323,500 | 5,233 | 224,856 |
| 1902. | 33,363,814 | 1,371,100 | 5,568 | 210,822 |
| 1903. | 31,279,416 | 1,618,850 | 10,355 | 149,530 |
| 1904. | 22,740,222 | 1,282,617 | 6,395 | 62,060 |
| 1905. | 21,367,716 | 687,000 | 7,282 | 46,969 |
| 1906. | 21,639,549 | 413,267 | 4,354 | 37,116 |
| 1907. | 42,779,414 | 71,500 | 8,698 | 44,588 |

In the table showing the total cut of lumber in the province it will be noticed that the number of mills varies greatly from year to year. This is due to the fact that there are a large number of small mills, many of them portable, which shift from place to place, some years being included in the statistics and some years being omitted.

CENSUS RETURNS FOR 1900.

According to the Dominion Census returns of 1901, the following is the value of the forest products of the province for 1900. In making up the returns, no distinction was made between the wood and timber cut on farms and that cut on larger tracts of land purchased or leased from the Crown but not sawn into lumber. Consequently, the following figures are intended to indicate the total quantities and values of the various classes of wood cut on all lands, whether patented, improved or leased.

| | Quantity. | Value. | Quantity. | Value. |
|-----------------------------------|-----------|-------------|-------------|-----------|
| | | \$ | | \$ |
| Saw logs... | Bbl. ft. | | 375,464,000 | 2,026,651 |
| Elm | " | 15,000 | 150 | |
| Hemlock | " | 2,190,000 | 20,750 | |
| Pine | " | 63,250,000 | 373,731 | |
| Spruce | " | 23,676,000 | 153,405 | |
| Other species | " | 285,997,000 | 1,478,315 | |
| Square, waney or flat timber... | C. ft. | | 874,477 | 107,770 |
| Elm | C. ft. | 11,000 | 1,100 | |
| Oak | " | 800 | 800 | |
| Pine | " | 35,182 | 4,960 | |
| Other species | " | 827,105 | 101,591 | |
| Railway ties | Pos. | | 245,517 | 12,172 |
| Telegraph poles | " | | 7,000 | 3,111 |
| Fence posts... | Pos. | | 707,308 | 24,369 |
| Piling | " | | 19,655 | 7,116 |
| Masts and spars | " | | 1,300 | 7,202 |
| Firewood | Cords | | 173,816 | 382,703 |
| Cooperage stock | " | | | 2,935 |
| Total value of forest products... | | | | 2,631,032 |

ONTARIO.

The great forest areas of Ontario consist of pine, red and white, spruce, balsam, jack-pine and tamarack up to the height of land; and on the slope towards Hudson Bay, black and white spruce and jackpine predominate. The hardwoods in this district are maple, yellow and white birch, with some ash, and burr and red oak. In south-western Ontario hardwoods such as oak, walnut, white ash, hickory, &c., were found but this forest has almost wholly disappeared.

In 1907 the total cut of pine, white and red, was 784,079,713 feet board measure, including 1,053,187 feet of squared timber. Mixed species including spruce, balsam, jack-pine, cedar, &c., total 86,435,759 feet board measure. Railway ties, mostly tamarack and cedar, with some jackpine, make 66,000,000 feet board measure. Pulpwood, mostly spruce and balsam, is given at 71,135 cords. The only hardwoods which appear in the returns are ash, birch and elm with a total of 2,155 cubic feet.

The area under license in 1907 was 48,730 square miles or 11,987,200 acres, and the area in Forest Reserves and Parks was 18,325 square miles or 11,728,000 acres, but these areas overlap to some extent.

The forest area of the province has been variously estimated. The only attempt at a systematic examination of the timber of which the results are available is that made by the expeditions sent out by the provincial government in 1900, which estimated the quantity of pulpwood on Crown lands at 288,000,000 cords. The provincial government officials estimate the pine on Crown lands at 10,000,000,000 feet board measure and a similar quantity on lands under license. They also estimate the timber area outside the forest reserves at 70,000,000 acres.

TIMBER PRODUCTION.

The following table, showing the quantities of saw-log timber cut on Crown lands during the last 27 years, has been compiled from the Crown Lands Reports:—

| Year. | SAW LOGS. | | | ROOM AND DIMENSION, TIMBER. | |
|-------|-------------|----------|----------------|--------------------------------|----------------|
| | Pine. | Hemlock. | Mixed Species. | Pine. | Mixed Species. |
| | B. M. | B. M. | B. M. | B. M. | B. M. |
| 1881 | 493,735,000 | 28,006 | 2,590,000 | 19,388,600 | |
| 1889 | 725,727,633 | 8,326 | 3,608,113 | 32,000,237 | |
| 1891 | 451,207,505 | 105,295 | 3,671,249 | 37,814,115 | |
| 1896 | 904,370,710 | | 15,197,752 | 34,373,465 | 2,056,660 |
| 1897 | 177,716,448 | | 8,758,716 | 26,084,737 | 700,860 |
| 1898 | 544,457,439 | | 8,224,442 | 25,610,239 | 1,317,222 |
| 1899 | 498,607,008 | | 15,396,393 | 29,361,605 | 2,189,068 |
| 1900 | 643,510,766 | | 36,721,998 | 34,724,488 | 6,866,909 |
| 1901 | 598,433,958 | | 40,216,917 | 32,755,638 | 5,255,252 |
| 1902 | 615,831,433 | | 38,634,341 | 38,539,856 | 4,994,331 |
| 1903 | 670,966,835 | | 58,183,180 | 38,834,442 | 7,984,371 |
| 1904 | 629,595,365 | | 42,215,398 | 33,559,527 | 5,228,844 |
| 1905 | 597,144,478 | | 58,233,977 | 25,295,801 | 6,112,374 |
| 1906 | 674,800,465 | | 66,945,987 | 29,517,482 | 8,507,487 |
| 1907 | 738,012,478 | | 78,292,918 | 39,748,143 | 7,812,811 |

| Years. | Squared White Pine. | Squared Red Pine. | Squared White Ash. | Squared Birch. | Squared Elm. | Oak. | Tamarac. | Maple. |
|---------------|------------------------|----------------------|-----------------------|-------------------|-----------------|----------|----------|----------|
| | Cub. ft. | Cub. ft. | Cub. ft. | Cub. ft. | Cub. ft. | Cub. ft. | Cub. ft. | Cub. ft. |
| 1881 | 4,847,114 | 1,481,683 | 38,743 | 63 | 3,833 | 6,285 | 4,275 | 91 |
| 1884 | 6,378,505 | 405,645 | 20,873 | 2,563 | 4,943 | 1,319 | 3,992 | 431 |
| 1891 | 1,557,075 | 22,839 | 175 | 1,645 | 210 | 928 | 3,908 | 48 |
| 1892 | 3,841,853 | 17,466 | 1,053 | 12,675 | 253 | 1,953 | | |
| Squared Pine. | | | | | | | | |
| 1896 | 1,128,666 | | 2,887 | 230 | | 129 | | |
| 1897 | 1,977,400 | | 3,900 | 23,869 | | 405 | 635 | |
| 1898 | 1,459,631 | | 9,764 | 5,210 | 188 | | 3,594 | |
| 1899 | 1,723,274 | | 1,238 | 13,384 | 18 | | 297 | 134 |
| 1900 | 1,919,230 | | 555 | 2,380 | | | | |
| 1901 | 1,755,881 | | 2,229 | 5,023 | 1,104 | 8,600 | 100 | |
| 1902 | 1,468,756 | | 169 | | | | | |
| 1903 | 803,777 | | 1,317 | 26,360 | | | | |
| 1904 | 1,963,938 | | | | | | | |
| 1905 | 1,069,167 | | 1,317 | 2,412 | | | | |
| 1906 | 638,228 | | 9,493 | 691 | 209 | | | |
| 1907 | 1,057,187 | | 1,772 | 12 | 4 | | | |

Of railroad ties the product in 1881 was 90,258 pieces which rose to 1,015,393 in 1885. Until 1900 the number annually was below one million except in 1893 and 1898. The highest production was in 1902 with 2,575,255 pieces and in 1907 the number was 1,987,540.

Pulpwood does not take an important place. It first appears in the returns in 1891 with 864 cords, and the highest figure was reached in 1906 with 84,961 cords. In 1907 it was 71,135 cords.

Other products in 1907 were: telegraph poles, 15,731; fence posts, 400; firewood, 35,530 cords; stave bolts, 3,148 pieces; tanbark, 20,268 cords; piling, 193,386 feet board measure; cedar, 149,726 lineal feet.

In these 27 years the amount of pine removed reached a total of 19,729,247,890 board feet; hemlock, 407,437 feet; and of mixed species 532,081,669 feet—giving 20,261,736,996 board feet altogether. To this must be added the amount removed as boom and dimension timber which amounts to 884,896,406 board feet. Altogether this gives a total of 21,446,543,492 board feet in saw-log and boom and dimension timber. In addition to this 21 billion board feet of timber removed there has been a very large amount of squared timber; of which the pine alone makes up 74,641,396 cubic feet. The quantities of railroad ties, poles, posts, firewood, pulpwood, piling, &c., have also been very large. When it is remembered that all this wood material has been cut from Crown lands alone, it will be seen that the province of Ontario has been a large producer of timber, from which the province derives a large part of its annual revenue.

Previous to 1898 large quantities of saw-logs were exported from north-western Ontario to supply sawmills in Michigan, but in that year the Ontario Legislature passed an Act requiring that all logs cut on Crown lands should be manufactured within the province. The result was that a large number of Michigan lumbermen transferred their operations to the Georgian Bay District, thus giving employment to a great many men within the province. Later an Act was passed prohibiting the export of pulpwood from Crown lands in Ontario.

According to the Dominion Census of 1901 Ontario used the following amounts of forest products:—

| | | Quantity. | Value. | Quantity. | Value. |
|--------------------------------|---------|-------------|------------|---------------|------------|
| \$ | | | | | |
| Sawn timber | Bd. ft. | 79,105,000 | 629,670 | 1,331,622,000 | 12,761,768 |
| Birch | " | 81,175,000 | 482,447 | | |
| Hemlock | " | 1,445,000 | 17,304 | | |
| Hickory | " | 8,842,000 | 126,901 | | |
| Oak | " | 981,352,000 | 10,116,667 | | |
| Pine | " | 8,709,000 | 71,221 | | |
| Spruce | " | 167,994,000 | 1,320,558 | | |
| Other species | " | | | | |
| Square, wavy or flat timber | C. ft. | 231,494 | 24,662 | 3,760,658 | 518,666 |
| Ash | " | 78,986 | 8,551 | | |
| Birch | " | 1,259,174 | 136,787 | | |
| Elm | " | 194,304 | 21,554 | | |
| Maple | " | 76,025 | 13,022 | | |
| Oak | " | 1,014,439 | 219,219 | | |
| Pine | " | 96,236 | 94,868 | | |
| Other species | " | | | | |
| Pulp wood | Cords. | | | 108,335 | 301,837 |
| Railway ties | Pes. | | | 3,621,395 | 627,815 |
| Telegraph poles | " | | | 152,180 | 131,827 |
| Fence posts | Pes. | | | 2,136,339 | 143,972 |
| Hop and hoop poles | " | | | 608 | |
| Piling | Pes. | | | 31,584 | 39,858 |
| Masts and spars | " | | | 908 | 2,545 |
| Cooperage stock | " | | | | 94,341 |
| Firewood | Cords. | | | 4,030,957 | 6,476,899 |
| Tanbark | " | | | 52,932 | 244,838 |
| Pot and pearl ashes | Bris. | | | 460 | 11,013 |
| Total value of forest products | | | | | 21,351,200 |

WOOD WORKING INDUSTRIES.

The following figures, taken from the Census of Manufactures for 1905 (taken in 1900), show the importance of various wood-working establishments in the province of Ontario. Some 1,991 establishments, employing 45,426 people and annually paying out \$18,485,934 in wages means that the wood-working industries have grown to large proportions and will always require large quantities of raw material.

| Number and Kind of Industry. | No. of establishments. | Hands employed. | Wages paid. | Fixed Buildings and Plant. | Working Capital. | Value of Products. |
|--|------------------------|-----------------|-------------|----------------------------|------------------|--------------------|
| | | | \$ | \$ | \$ | \$ |
| Baskets | 20 | 361 | 91,071 | 89,850 | 111,660 | 205,807 |
| Boats and canoes | 38 | 259 | 123,001 | 161,669 | 135,347 | 250,014 |
| Boxes, cigar | 3 | 119 | 17,098 | | | 179,729 |
| Boxes, wooden | 37 | 857 | 279,949 | 411,504 | 391,985 | 1,011,921 |
| Carriages and wagons | 197 | 3,759 | 1,742,828 | | | 6,254,580 |
| Coffins and caskets | 9 | 381 | 171,530 | 295,591 | 459,313 | 654,802 |
| Coffinage | 84 | 1,123 | 505,039 | 470,277 | 1,115,669 | 1,561,823 |
| Furniture | 126 | 6,553 | 2,631,881 | 4,102,387 | 4,979,583 | 7,375,528 |
| Fastenings and pins | 3 | 22 | 11,081 | 10,104 | 7,187 | 31,629 |
| Log products | 735 | 20,200 | 7,595,449 | 17,822,491 | 21,328,265 | 31,626,222 |
| Lumber products | 358 | 7,202 | 3,321,290 | 4,740,298 | 6,309,265 | 12,882,221 |
| Paper | 17 | 1,223 | 625,556 | 3,200,866 | 2,994,410 | 3,178,602 |
| Picture frames | 6 | 369 | 180,358 | 165,900 | 210,417 | 485,664 |
| Refrigerators | 4 | 166 | 79,000 | | | 258,000 |
| Ships and ship repairs | 7 | 473 | 209,375 | 1,270,353 | 360,500 | 121,773 |
| Washing machines and wringers | 3 | 170 | 69,358 | 87,927 | 143,349 | 251,052 |
| Woodenware | 7 | 411 | 183,811 | 395,000 | 305,000 | 464,295 |
| Wood pulp, chemical and mechanical | 5 | 917 | 30,919 | 2,075,802 | 2,192,555 | 1,162,970 |
| Woodworking and turning | 36 | 586 | 253,455 | 305,786 | 301,309 | 629,609 |
| Totals | 1,991 | 45,426 | 18,485,934 | 35,556,191 | 40,343,509 | 60,635,690 |

QUEBEC.

The forests of Quebec are similar to those of Ontario but with a larger proportion of spruce.

The area under forest reserve is 171,061½ square miles or 111,401,280 acres, which includes practically all the forest land of the province except 8,000 square miles stated by the provincial officials to be in private hands. The area under license, which is included within the reserves, is 80,000 square miles. A large proportion of the lands reserved do not bear timber of commercial value at the present time, but no systematic survey has been made to determine their condition.

In 1907 the production of pine, white and red, was 331,411,795 feet board measure, of which 259,360 feet were square timber. Of mixed species, including jackpine, spruce, hemlock, balsam, cedar, &c., the product was 362,726,079 feet board measure. Railway ties, comprising tamarack, cedar and some jackpine, consumed 21,097,600 feet board measure. The pulpwood product, mostly spruce and balsam, was 236,401 cords, of which 108,966 cords were exported. The hardwoods, including oak, elm, birch and ash, total 280,278 cubic feet.

PRODUCTION FOR THE LAST FIVE YEARS

The following table, compiled from the Crown lands report for the last five years, shows the number of square miles of timber land under license and the production of various kinds of forest produce. It will be noticed that the quantity of pulpwood cut on Crown lands has not risen very rapidly, although the quantity exported has more than doubled during five years. Less than half the pulpwood exported from the province is cut from Crown lands the greater portion being cut from private lands.

| Year. | Square miles under license. | White Pine and Balsam Fir | | Red Pine, Spruce and Balsam Fir | | Larch, Spruce, Fir, Fir, Balsam Fir, and Fir, Spruce and Balsam Fir | |
|---------|-----------------------------|---------------------------|-------------|---------------------------------|------------|---|-------------|
| | | Pes. | B. F. | Pes. | B. F. | Pes. | B. F. |
| 1902-3. | 62,730 | 3,091,205 | 250,644,149 | 207,755 | 23,578,026 | 5,858,143 | 288,068,124 |
| 1903-4. | 64,379 | 2,993,260 | 244,360,847 | 432,640 | 33,104,822 | 8,410,076 | 377,219,710 |
| 1904-5. | 67,400 | 3,200,428 | 267,523,528 | 397,704 | 30,359,373 | 11,118,977 | 431,272,700 |
| 1905-6. | 69,226 | 3,423,885 | 270,958,631 | 385,636 | 27,083,654 | 10,395,825 | 364,832,342 |
| 1906-7. | 68,112 | 3,710,752 | 283,666,605 | 445,824 | 32,181,030 | 10,564,719 | 362,726,079 |

| Year. | Spruce Pine. | | Spruce Hardwood. | | Fir, Spruce and Balsam Fir. |
|---------|--------------|---------|------------------|---------|-----------------------------|
| | Pes. | C. F. | Pes. | C. F. | |
| 1902-3. | 11,456 | 506,768 | 1,657 | 56,647 | 512,871 |
| 1903-4. | 20,803 | 950,451 | 5,258 | 150,319 | 780,360 |
| 1904-5. | 6,366 | 259,360 | 13,601 | 419,647 | 377,635 |
| 1905-6. | | | 5,869 | 198,615 | 1,107,732 |
| 1906-7. | | | 8,520 | 280,278 | 722,928 |

| Year. | Pulpwood, Cords | |
|---------|---------------------------|----------------------------------|
| | Crown Lands | Private Lands |
| 1902-3. | 202,633, of which 51,962 | cords were exported from Canada. |
| 1903-4. | 259,231, of which 70,576 | " |
| 1904-5. | 250,493, of which 93,625 | " |
| 1905-6. | 324,109, of which 136,340 | " |
| 1906-7. | 236,401, of which 108,966 | " |

During the fiscal years 1906-07 there were also produced 123,590 lineal feet of poles, 10,370 posts, 1,535 cords of firewood, 9,343 cords of spoolwood, 1,157 rails and 1,964 pickets.

EXPORT TRADE

Until comparatively recent years the city of Quebec was the centre of the timber and lumber export trade, but with the displacement of sailing vessels by steam vessels of large tonnage and the improvement of the St. Lawrence route, Montreal soon came to the premier position. The change is largely coincident with the decline in square timber shipments and the growth of the trade in sawn lumber. In 1864 some 20,032,520 cubic feet of square and waxy timber were shipped from Quebec, but since that time the trade has gradually declined. Barges laden with deals and boards can be brought along the Ottawa river and Lachine canal and the lumber transferred directly to ocean-going steamers at Montreal, thus reducing the cost of shipment.

The great body of the export trade in lumber consists of white pine and spruce, with oak and elm as the leading hardwoods.

In the years 1903 and 1908, the value of forest products shipped from Montreal was as follows:

| | 1903. | 1908. |
|-------------------------|--------------|-------------|
| Pine deals . . . | \$3,117,150 | \$1,171,976 |
| Spruce and other deals. | 684,070 | 283,751 |
| Planks and boards | 650,008 | 909,235 |
| Pulpwood | 131,152 | 213,503 |
| Other products | 509,092 | 440,569 |
| Total. | \$ 5,121,472 | \$3,322,034 |

From Quebec the value was:

| | 1903. | 1908. |
|--------------------------|-------------|-------------|
| Pine deals . . . | \$ 122,960 | \$ 11,124 |
| Spruce and other deals. | 1,270,325 | 938,128 |
| Planks and boards. | 68,539 | 140,521 |
| Squared white pine . . . | 1,297,127 | 985,501 |
| Squared red pine . . . | 212,634 | 6,017 |
| Squared oak | 441,313 | 155,283 |
| Squared elm | 296,196 | 125,914 |
| Other products | 392,652 | 339,239 |
| Total | \$4,072,346 | \$2,701,787 |

For 1903 and 1908 the following quantities of deals, boards, &c., were exported from St. Lawrence ports for the trans-Atlantic markets:—

| | Et. B.M. |
|----------------|-------------|
| 1903 | 445,341,609 |
| 1908 | 229,649,000 |

It is scarcely necessary to state that part of the lumber and timber exported from these ports comes from the province of Ontario.

CENSUS OF 1901.

According to the census of 1901 the following quantities of forest products were obtained in the province of Quebec during 1900:

| | Quantity. | Value. | Quantity. | Value. |
|--------------------------------|-------------|-----------|---------------|------------|
| | | \$ | | \$ |
| Sawlogs | | | | |
| Elm | B. ft. | | | |
| Hemlock | 2,471,000 | 29,070 | 1,201,857,000 | 10,816,644 |
| Hickory | 38,121,000 | 27,328 | | |
| Oak | 151,000 | 1,000 | | |
| Pine | 595,000 | 10,080 | | |
| Spruce | 145,036,000 | 4,587,518 | | |
| Other species | 599,447,000 | 1,502,102 | | |
| Square, waxy or flat timber | | | | |
| Ash | Cu. ft. | | | |
| Birch | 179,717 | 19,028 | 5,520,880 | 67,000 |
| Elm | 559,481 | 71,115 | | |
| Maple | 82,055 | 9,061 | | |
| Oak | 80,273 | 8,585 | | |
| Pine | 10,263 | 2,122 | | |
| Other species | 1,132,957 | 212,850 | | |
| Pulpwood | | | | |
| Railway ties | Cords | | | |
| Telegraph poles | Pos. | | 520,865 | 1,775,375 |
| Fence posts | | | 2,701,807 | 441,350 |
| Hop and hoop poles | | | 82,386 | 61,707 |
| Piling | | | 8,662,298 | 257,236 |
| Masts and spars | Pos. | | 1,673 | |
| Cooperage stock | | | 26,080 | 15,350 |
| Firewood | | | 6,751 | 8,985 |
| Tanbark | Cords | | | 8,251 |
| Pot and pearl ashes | Brls. | | 3,070,273 | 1,711,611 |
| | | | 27,991 | 120,265 |
| | | | 297 | 8,161 |
| Total value of forest products | | | | 18,068,914 |

WOOD WORKING INDUSTRIES

The census of Manufacturing Industries of 1906 shows the following list of wood-working industries in the province of Quebec in the year 1905. It will be noticed that they employed 24,262 hands, receiving a yearly wage of \$9,370,109, and turning out goods valued at \$25,890,855. The number of hands engaged in the manufacture of log and lumber products was 17,767, with a yearly wage of \$6,291,727.

| Name or kind of Industry. | Establishments. | Employees. | Salaries and wages. | Land Buildings and Plants. | Working Capital. | Value of Products. |
|------------------------------------|-----------------|------------|---------------------|----------------------------|------------------|--------------------|
| | No. | No. | \$ | \$ | \$ | \$ |
| Boxes, wooden | 24 | 562 | 167,862 | 252,493 | 255,928 | 526,674 |
| Carrages and wagons | 111 | 2,086 | 1,377,719 | | | 111,450 |
| Cooperage | 4 | 68 | 31,350 | 65,000 | 61,500 | 3,570,769 |
| Furniture | 36 | 1,190 | 28,143 | 667,594 | 815,147 | 1,161,887 |
| Leads and pegs | 5 | 79 | 31,082 | 27,500 | 33,950 | 70,958 |
| Log products | 990 | 11,633 | 4,928,624 | 13,077,479 | 11,098,991 | 14,489,296 |
| Lumber products | 151 | 3,134 | 1,363,103 | 2,063,252 | 2,098,994 | 3,787,781 |
| Picture frames | 4 | 70 | 33,797 | 50,590 | 84,000 | 89,540 |
| Ships and ship repairs | 3 | 751 | 571,780 | 393,700 | 30,000 | 780,000 |
| Spinning wheels | 3 | 10 | 2,500 | 5,000 | 4,000 | 4,000 |
| Wood pulp, chemical and mechanical | 10 | 891 | 371,552 | 2,551,863 | 1,671,548 | 1,154,370 |
| Woodworking and turning | 8 | 185 | 56,687 | 153,830 | 137,051 | 114,220 |
| Totals | 1,057 | 24,262 | 9,370,109 | 19,251,211 | 16,290,019 | 25,890,855 |

NEW BRUNSWICK

The chief timber tree of New Brunswick is spruce, with a small percentage of pine, hemlock, balsam fir and cedar intermingled. The hardwoods comprise birch, beech, ash and hardwood.

The Crown lands comprises an area of 1,500,000 acres of which 6,300,000 are under license, and this area will represent fairly well the forest area of the province. No systematic survey has been made.

In 1907, the cut of spruce and pine was 113,113,500 feet board measure, and of balsam fir, hemlock and cedar 3,360,765 feet board measure. Hardwoods totalled 3,491,206 feet board measure. Railway ties made 1,705,136 feet board measure. Pulpwood is not given separately.

TIMBER PRODUCTION

The following table, compiled from the reports of the Crown Lands Department, shows the number of superficial feet of spruce and pine, hemlock, cedar, etc., cut from Crown lands in the years specified.

| Year. | Spruce and Pine Logs | | Hemlock Logs | | Cedar Logs | |
|------------|----------------------|----------|--------------|----------|------------|----------|
| | Sup. Ft. | Sup. Ft. | Sup. Ft. | Sup. Ft. | Sup. Ft. | Sup. Ft. |
| 1879 | 88,856,801 | | 92,750 | | 28,324 | |
| 1880 | 117,511,482 | | 106,271 | | 79,824 | |
| 1883 | 111,943,725 | | 11,579,860 | | 801,525 | |
| 1890 | 95,539,612 | | 12,139,018 | | 1,716,201 | |

| Year. | Spruce and Pine | Cedar. | Hemlock. | Balsam Fir | Boom Poles | Hardwood. |
|-------|-----------------|------------|-----------|------------|------------|-----------|
| | Ft. | Ft. | Ft. | Ft. | Ft. | Ft. |
| 1900 | 91,979,461 | 14,417,895 | 5,826,785 | 1,637,486 | 6,330 | 1,896,504 |
| 1901 | 84,449,123 | 11,487,791 | 1,907,816 | 1,164,283 | 790 | 3,569,741 |
| 1902 | 86,631,693 | 15,357,249 | 2,388,567 | 2,731,111 | 1,173 | 2,936,007 |
| 1903 | 96,837,515 | 16,011,955 | 2,627,694 | 4,219,593 | 6,225 | 3,809,712 |
| 1904 | 115,474,355 | 15,972,497 | 1,711,638 | 3,160,111 | 3,810 | 3,006,810 |
| 1905 | 82,446,438 | 11,253,677 | 3,361,490 | 7,557,978 | 3,575 | 2,758,093 |
| 1906 | 108,625,313 | 11,213,691 | 2,639,000 | 11,982,222 | 1,900 | 3,998,220 |
| 1907 | 113,113,500 | 10,266,010 | 3,192,110 | 19,177,615 | 1,791 | 3,401,206 |

In 1907 the cut also included 5,512 cords of wood, including pulpwood, 865 cords of hemlock bark, 900 telegraph poles, 375 lineal feet of piling, 100 cedar posts, 141,155 railway ties, 5,000,000 shingles, 1,600,000 laths, 3,750 brackets. The largest output of shingles was in 1903 with 12,450,000.

The average for the last five years has been 103,369,421 feet of spruce and pine, 13,019,572 of cedar, 9,849,570 of balsam fir, 2,707,986 of hemlock, 3,406,898 of hardwoods and 117,927 ties, which at an average of 33½ feet per tie amounts to 3,939,900 board feet -- thus making up a total of 136,270,960 feet. If the minor forest products are added the average will be between 140 and 150 million feet per annum.

EXPORT TRADE.

In 1825 the exports of squared pine reached a total of 116,015 tons, after which time the trade gradually declined because of the exhaustion of the pine and the ascendancy of spruce and other woods. With drivable streams running from every part of the interior to the sea it was only natural that the export trade should be developed early in the history of the province. The principal sea ports are St. John, Miramichi, Dalhousie, Campbellton, Bathurst, Sackville, Hopewell, Chatham, Newcastle, Dorchester, Harvey, Shediac, Richibucto, Hillsborough and Buctouche; the great bulk of the trade is centered in St. John and Miramichi.

The exports for the last sixteen years vary between three hundred and five hundred million feet board measure, the lowest being in 1893 with 317,000,000 feet, and the highest in 1897 with 191,000,000 board feet. In 1908 it was 132,797,000 feet.

RETURNS FOR 1909.

From the Census of Canada of 1909, taken the following statement regarding the production of sawlogs, square timber and other forest products which is supposed to include the cut from both public and private lands during 1909.

| | Quantity. | Value. | Quantity. | Value. |
|--------------------------------|-------------|-----------|-------------|-----------|
| | | \$ | | \$ |
| Saw logs | | | 290,831,000 | 1,007,674 |
| Fir | 161,000 | 1,510 | | |
| Hemlock | 26,150,000 | 107,571 | | |
| Hickory | 35,000 | 84 | | |
| Oak | 25,000 | 242 | | |
| Pine | 19,100,000 | 125,211 | | |
| Spruce | 182,779,000 | 1,090,362 | | |
| Other species | 91,721,000 | 333,637 | | |
| Square, wormy or hot timber | | | 329,770 | 31,184 |
| Ash | 1,000 | 20 | | |
| Birch | 1,632,218 | 17,610 | | |
| Fir | 1,100 | 110 | | |
| Maple | 1,722 | 78 | | |
| Oak | 200 | 78 | | |
| Pine | 60,000 | 6,722 | | |
| Other species | 99,172 | 9,521 | | |
| Firwood | Cords | | 14,486 | 37,574 |
| Railway ties | Pcs | | 827,305 | 14,159 |
| Telegraph poles | | | 11,071 | 7,779 |
| Lence posts | | | 637,221 | 22,619 |
| Hop and hoop poles | | | 2,580 | |
| Piling | Pcs | | 39,519 | 11,807 |
| Masts and spars | | | 19,572 | 3,272 |
| Firewood | Cords | | 495,451 | 681,381 |
| Timber | | | 16,115 | 71,322 |
| Pot and pearl ashes | Bbl | | 1 | 12 |
| Coopage stock | | | | 6,500 |
| Total value of forest products | | | | 2,995,649 |

LEMBER AND PULP INDUSTRIES.

The following statement, from the Census of 1905, shows the lumbering and pulp industries within the province for 1905.

| Industry | No. of Establishments | Employees | Annual Wages | Value of Land, Plant and Buildings | Working Capital | Value of Products |
|--------------------------------|-----------------------|--------------|------------------|------------------------------------|------------------|-------------------|
| | | | \$ | \$ | \$ | \$ |
| Log products | 152 | 5,530 | 1,000,665 | 3,888,812 | 3,220,101 | 5,725,300 |
| Lumber products | 35 | 791 | 321,782 | 155,970 | 459,570 | 905,062 |
| Wood pulp, ground and chemical | 1 | 501 | 211,610 | 1,050,000 | 325,000 | 967,782 |
| Totals | 191 | 6,821 | 2,068,087 | 5,994,802 | 4,004,671 | 7,628,081 |

NOVA SCOTIA.

The forests of Nova Scotia are of much the same general character as those in New Brunswick. The forest area has been placed at 7,000,000 acres, of which two million acres are in the hands of private owners and probably one half is forested. No systematic survey has been made.

Owing to the timber lands being so largely in private ownership, official returns give little information. The lumber cut for 1907 was estimated at 350,000,000 feet board measure, mainly spruce, of which 202,500,000 feet were exported.

EXPORT TRADE.

The home consumption of timber is comparatively light. With a long coast line and plenty of shipping of her own, the province has naturally developed an extensive export trade with England, Ireland, Scotland, France, the United States, the West Indies, Cuba, Argentine Republic, Brazil, British Guiana and Trinidad. The shipment of deals, &c., to trans Atlantic ports from 1892 to 1902 is shown in the following table:

| Year. | Board Feet. | Year. | Board Feet. |
|-------|-------------|-------|-------------|
| 1892 | 87,861,398 | 1898 | 148,239,894 |
| 1893 | 109,252,910 | 1899 | 128,009,504 |
| 1894 | 106,327,250 | 1900 | 146,294,110 |
| 1895 | 109,321,393 | 1901 | 182,000,333 |
| 1896 | 123,116,389 | 1902 | 153,700,468 |
| 1897 | 183,362,562 | | |

In recent years, it is estimated that the total export trade from the eastern part of the province averages 135,000,000 feet annually, and from the western part about 110,000,000 - a total of 245,000,000 board feet. In 1907 the lumber cut in the province is said to have amounted to 350 million feet, of which no less than 262½ million were exported. In this year there were also shipped 20,000 tons of wood pulp to England.

CENSUS RETURNS FOR 1901.

The Dominion Census of the year 1901 furnishes the following information regarding the timber obtained from both Crown and private lands during 1900, and gives its estimated value.

| | | Quantity. | Value | Quantity | Value |
|---------------------------------------|----------------|------------|-----------|-------------|-----------|
| | | | \$ | | \$ |
| Sawlogs | B. ft. | | | 241,343,000 | 1,849,936 |
| Lime | | 25,000 | 244 | | |
| Hemlock | | 18,877,000 | 247,844 | | |
| Hickory | | 16,000 | 166 | | |
| Oak | | 881,000 | 15,207 | | |
| Pine | | 18,000,000 | 114,007 | | |
| Spruce | | 26,781,000 | 1,272,651 | | |
| Other species | | | 168,956 | | |
| Square, waney or flat timber | Cu. ft. | | | 100,680 | 100,102 |
| Ash | | 3,502 | 371 | | |
| Birch | | 382,126 | 17,781 | | |
| Lime | | 410 | 48 | | |
| Maple | | 16,419 | 1,124 | | |
| Oak | | 22,244 | 1,164 | | |
| Pine | | 98,577 | 12,924 | | |
| Other species | | 536,474 | 14,697 | | |
| Pulpwood | Cords | | | | |
| Railway ties | | | | 48,418 | 48,320 |
| Telegraph poles | | | | 315,007 | 60,782 |
| Lance posts | | | | 2,386 | 837 |
| Gap and hoop poles | | | | 1,481,150 | 52,873 |
| Piling | | | | 18,674 | |
| Miscellaneous spurs | | | | 187,373 | 128,181 |
| Cooperage stock | | | | 2,527 | 6,649 |
| Firewood | | | | | 37,121 |
| Lumber | | | | 535,862 | 1,091,237 |
| Total value of forest products | | | | 3,550 | 12,864 |
| | | | | | 3,339,875 |

WOODWORKING INDUSTRIES.

The following table, from the census returns of 1901, furnishes some interesting information regarding the various woodworking industries within the province, the number of hands employed, wages paid, value of land, buildings and plant, working capital, and estimated value of products.

| Name or kind of industry. | No. of Establishments. | Hands Employed. | Wages paid | Land, Buildings and Plant. | Working Capital. | Value of Products. |
|------------------------------------|------------------------|-----------------|------------------|----------------------------|------------------|--------------------|
| | | | \$ | \$ | \$ | \$ |
| Boats and rafts | 4 | 37 | 12,410 | 11,000 | 11,000 | 22,514 |
| Boxes, wooden | 3 | 8 | 2,175 | 3,600 | 2,000 | 6,799 |
| Cooperage | 11 | 111 | 42,963 | 54,800 | 41,800 | 161,650 |
| Furniture | 7 | 261 | 169,337 | 199,494 | 298,461 | 250,687 |
| Log products | 167 | 4,638 | 1,573,503 | 5,442,550 | 2,498,515 | 3,651,718 |
| Ships and ship repairs | 11 | 596 | 240,031 | 347,123 | 224,162 | 747,134 |
| Wood pulp, chemical and mechanical | 16 | 402 | 151,017 | 755,800 | 244,000 | 335,751 |
| Woodworking and turning | 3 | 112 | 53,600 | 285,000 | 110,000 | 178,000 |
| | 3 | 4 | 1,550 | 1,000 | 4,399 | 2,550 |
| Totals | 255 | 6,202 | 2,186,586 | 7,049,367 | 3,446,748 | 5,359,226 |

PRINCE EDWARD ISLAND.

The area of woodlands is given as 797 square miles, or 130,000 acres, of which about 10 per cent. contains timber of merchantable size. The timber is mainly spruce and balsam fir, with an intermingling of pine, hemlock, larch, cedar, maple, birch, ash, elm and oak.

As the forest lands are nearly all in private hands there are no official returns of the timber cut except those for the census year. According to the census of 1901 the cut of spruce was 3,018,000 feet board measure, while all other species brought up the amount to about 6,500,000. Hardwoods made a total of 315,192 feet board measure.

According to the Census of 1901 the following forest products were obtained on the Island in 1900:

| | | 1900. | | 1901. | |
|-----------------------------------|---------|-----------|--------|-----------|---------|
| | | Quantity. | Value. | Quantity. | Value. |
| | | \$ | | \$ | |
| Sawlogs... | B.M. | | | 5,884,000 | 49,139 |
| Elm | " | 5,000 | 48 | | |
| Hemlock | " | 419,000 | 3,114 | | |
| Hickory | " | 3,000 | 49 | | |
| Oak | " | 5,000 | 38 | | |
| Pine | " | 29,000 | 377 | | |
| Spruce | " | 3,018,000 | 21,850 | | |
| Other species | " | 2,375,000 | 20,363 | | |
| Square, waney or flat timber... | Cu. ft. | | | 101,994 | 31,357 |
| Ash | " | 3,507 | 311 | | |
| Birch | " | 32,751 | 3,819 | | |
| Elm | " | 366 | 31 | | |
| Maple | " | 20,665 | 2,275 | | |
| Pine | " | 1,879 | 210 | | |
| Other species | " | 11,533 | 4,671 | | |
| Railway ties... | Pcs. | | | 3,158 | 630 |
| Fence posts... | " | | | 1,481,001 | 27,500 |
| Hop and hoop poles | " | | | 375 | |
| Piling... | Pcs. | | | 3,658 | 2,196 |
| Masts and spars | " | | | 221 | 330 |
| Cooperage stock... | " | | | | |
| Firewood... | Cords | | | 129,532 | 163,377 |
| Tanbark... | " | | | 61 | 211 |
| Total value of forest products... | | | | | 284,663 |

MANUFACTURING ESTABLISHMENTS—CENSUS OF 1906.

| Name or kind of Industry. | No. of Establishments. | Hands employed. | Wages paid. | Land, Buildings and Plant. | Working Capital. | Value of Products. |
|---------------------------|------------------------|-----------------|-------------|----------------------------|------------------|--------------------|
| | | | \$ | \$ | \$ | \$ |
| Furniture... | 4 | 35 | 15,090 | 29,000 | 19,000 | 36,600 |
| Ice production... | 12 | 117 | 9,517 | 43,443 | 5,075 | 25,540 |
| Lumber products... | 8 | 69 | 23,265 | 53,500 | 59,500 | 80,100 |
| Totals | 31 | 164 | 47,782 | 126,100 | 83,575 | 152,240 |

CONCLUSIONS

On a consideration of the present position of the case in regard to statistics of the forests and forest products, the following recommendations are made:

(1). Provision should be made for the collection of statistics in regard to forest products annually, so as to include the product from private as well as public lands. This could be done by the Forestry Branch in co-operation with the Census Bureau.

(2). Timber surveys of the forest reserves and other forest areas under their respective jurisdictions should be undertaken by the Dominion and provincial authorities with the least possible delay.

(3). Official reports of timber operations should contain more detailed information in regard to species.

